

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2002	
BUDGET ACTIVITY 03 - Advanced Technology Development				PE NUMBER AND TITLE 0603311F Ballistic Missile Technology				PROJECT 4091	
COST (\$ in Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
4091 Missile Electronics	22,249	1,188	0	0	0	0	0	0	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0
<p>In FY 2003, this program anticipates receiving \$4.9 million from the Cost of War Transfer Account. These funds are not included in the FY 2003 Air Force baseline. Funding will be used for ballistic missile technologies in support of the Technology for Sustainment of Strategic Systems program.</p> <p>(U) <u>A. Mission Description</u> This program develops, integrates, and demonstrates advanced guidance, navigation, and control technologies for ballistic missiles, including upgrades of instrumentation for range safety. Note: This program was eliminated at the end of FY 1997; however, Congress added funds for Missile Technology Demonstration (MTD) flight testing and Radiation-Hardened Electronics in FY 1998, for Ballistic Missile Technology and Range Safety in FY 1999, for Ballistic Missile Technology in FYs 2000 and 2001, and for Global Positioning System (GPS) Range Safety in 2002.</p> <p>(U) <u>FY 2001 (\$ in Thousands)</u></p> <p>(U) \$16,066 Developed technologies for the integration of advanced Global Positioning System-Inertial Navigation System (GPS-INS) technologies into space and missile range instrumentation and missile guidance systems to meet more stringent range safety requirements. Flight tested a site-mobile GPS-INS range safety system to demonstrate greatly improved integrity of missile-tracking data in all phases of flight at greatly reduced operational costs while providing greater range flexibility and supporting launch on demand. Initiated certification of the GPS-INS range safety system at missile launch sites.</p> <p>(U) \$1,439 Developed and demonstrated GPS-INS technologies to improve performance during all phases of flight to include ballistic reentry plasma blackout and jamming environments. These technologies will mitigate detrimental effects of reentry plasma and jamming on GPS-INS navigation performance. Transitioned current advanced GPS anti-jamming receiver, enhanced antenna architecture, and novel window material technologies to concept exploration. Designed and demonstrated critical components/technologies essential to new reentry architectures.</p> <p>(U) \$4,744 Developed and demonstrated advanced common ballistic missile technologies necessary for the Air Force and Navy replacement and life extension programs. Advanced concept exploration of common ballistic missile technologies will support an analysis of alternatives for concept exploration. Selected affordable, existing advanced-technologies directly tied to user requirements. Conducted concept/technology demonstrations that focus on evolutionary vehicle designs using advanced common guidance and flight control technologies/components and sustainable less costly heat shield materials. Demonstrated revolutionary materials testing, service life prediction/component age out, and</p>									
<div style="display: flex; justify-content: space-between;"> Project 4091 Page 1 of 3 Pages Exhibit R-2 (PE 0603311F) </div>									

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 2002																																				
BUDGET ACTIVITY 03 - Advanced Technology Development	PE NUMBER AND TITLE 0603311F Ballistic Missile Technology		PROJECT 4091																																			
<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2001 (\$ in Thousands) Continued</u></p> <p style="padding-left: 40px;">recovery techniques.</p> <p>(U) \$22,249 Total</p> <p>(U) <u>FY 2002 (\$ in Thousands)</u></p> <p>(U) \$990 Develop technologies for the integration of advanced Global Position System-Inertial Navigation System (GPS-INS) technologies into space and missile range instrumentation and missile guidance systems to meet more stringent range safety requirements. Develop and demonstrate robust technologies for the command and control system providing non-interfering, continuous, two-way missile communication under all flight conditions.</p> <p>(U) \$124 Extend the acceptance and certification of qualified GPS-INS range safety technologies to meet launch-range requirements in more locations and encompassing more severe launch conditions.</p> <p>(U) \$74 Continue plasma technology development efforts to mitigate GPS communication loss through the reentry blackout phase of flight.</p> <p>(U) \$1,188 Total</p> <p>(U) <u>FY 2003 (\$ in Thousands)</u></p> <p>(U) \$0 No Activity</p> <p>(U) \$0 Total</p> <p>(U) <u>B. Budget Activity Justification</u></p> <p style="padding-left: 20px;">This program is in Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies for existing system upgrades and/or new system developments that have military utility and address warfighter needs.</p> <p>(U) <u>C. Program Change Summary (\$ in Thousands)</u></p> <table style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 15%; text-align: center;"><u>FY 2001</u></th> <th style="width: 15%; text-align: center;"><u>FY 2002</u></th> <th style="width: 15%; text-align: center;"><u>FY 2003</u></th> <th style="width: 15%; text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: center;">22,789</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>(U) Appropriated Value</td> <td style="text-align: center;">23,000</td> <td style="text-align: center;">1,200</td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustments to Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">a. Congressional/General Reductions</td> <td></td> <td style="text-align: center;">-12</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">b. Small Business Innovative Research</td> <td style="text-align: center;">-540</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">c. Omnibus or Other Above Threshold Reprogram</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>	(U) Previous President's Budget	22,789	0	0		(U) Appropriated Value	23,000	1,200			(U) Adjustments to Appropriated Value					a. Congressional/General Reductions		-12			b. Small Business Innovative Research	-540				c. Omnibus or Other Above Threshold Reprogram				
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>																																		
(U) Previous President's Budget	22,789	0	0																																			
(U) Appropriated Value	23,000	1,200																																				
(U) Adjustments to Appropriated Value																																						
a. Congressional/General Reductions		-12																																				
b. Small Business Innovative Research	-540																																					
c. Omnibus or Other Above Threshold Reprogram																																						
<div style="display: flex; justify-content: space-between;"> Project 4091 Page 2 of 3 Pages Exhibit R-2 (PE 0603311F) </div>																																						

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)				DATE February 2002
BUDGET ACTIVITY	PE NUMBER AND TITLE			PROJECT
03 - Advanced Technology Development	0603311F Ballistic Missile Technology			4091
(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u>				
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>
d. Below Threshold Reprogram				
e. Rescissions	-211			
(U) Adjustments to Budget Years Since FY 2002 PBR		0		
(U) Current Budget Submit/FY 2003 PBR	22,249	1,188	0	TBD
(U) <u>Significant Program Changes:</u> Not Applicable.				
(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u>				
(U) Related Activities:				
(U) PE 0602204F, Aerospace Sensors.				
(U) This project has been coordinated through the Reliance process to harmonize efforts and eliminate duplication.				
(U) <u>E. Acquisition Strategy</u> Not Applicable.				
(U) <u>F. Schedule Profile</u>				
(U) Not Applicable.				
<div style="display: flex; justify-content: space-between;"> Project 4091 Page 3 of 3 Pages Exhibit R-2 (PE 0603311F) </div>				